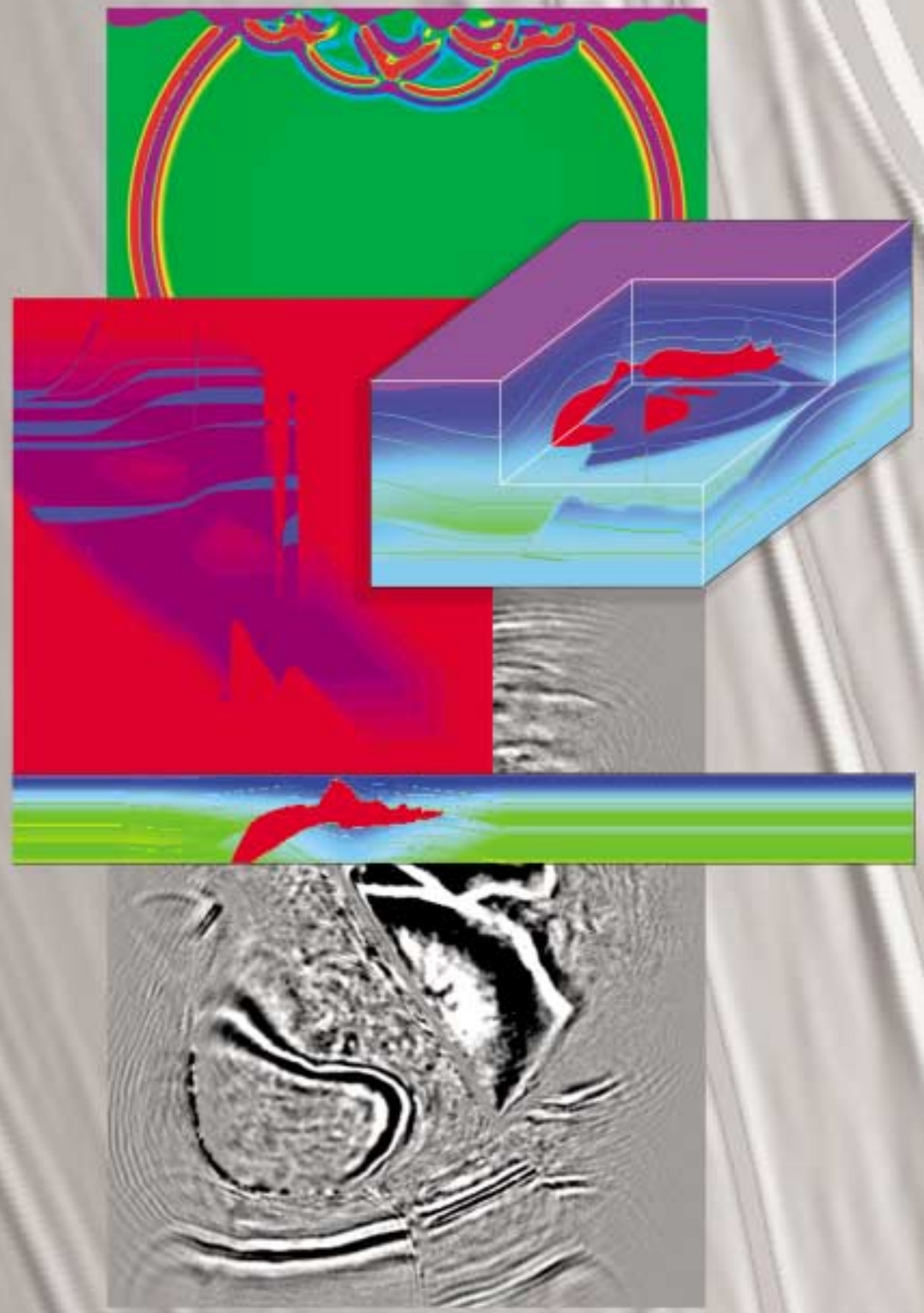

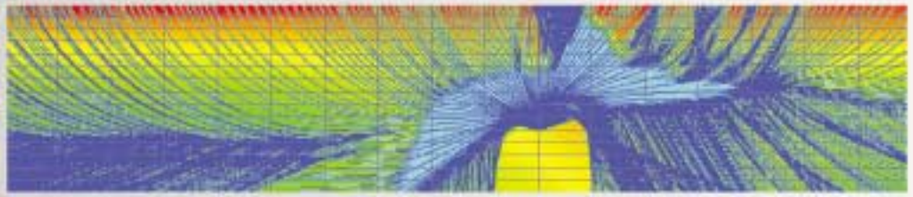

Oil and Gas

Under almost any scenario, fossil energy will remain the most important energy resource for at least the next few decades. Ongoing oil and gas research projects in EES continue to focus on science and technology needs for increased domestic petroleum exploration and production, increased geothermal energy production, and carbon sequestration. While some of the research is basic, a great deal is applied. We continue to concentrate on cost-shared research, both with industry consortia and in government/industry collaborations. Collaborators include major US and independent gas and oil producers, service companies, research universities, and other national laboratories. Significant efforts in the Division are focused on the following areas: (1) improved seismic imaging for characterization of the Earth's subsurface using both conventional (ray-based) and advanced (wave-equation based) methods; (2) development of innovative drilling methods such as microdrilling; (3) prediction of flow paths in petroleum reservoirs from observation and analysis of seismicity induced by flow; (4) computational reservoir simulation; and (5) development of novel well-logging instrumentation tools for microholes.